AMENDMENTS TO THE DRAWINGS

The attached replacement sheet is labeled "Replacement Sheet" in the page header, and replaces FIG. 4. This figure now includes the legend "Prior Art" because only that which is old is illustrated. Additionally, the left-handed coordinate system in FIG. 4 has been amended by switching the "Z" with the "Y" to create a right-handed coordinate system, in order to be consistent with the "standard" right-handed coordinate system displayed FIG. 1.

REMARKS

In response to the Office Action dated November 28, 2007, claims 1 and 8 have been amended. Claims 1-11 are now active in this application. No new matter has been added. For example, the amendment to claim 1 is supported, at a minimum, by the specification at page 22, lines 17-20, and by FIGS. 1 and 2. Claim 1 is the only independent claim.

FIG. 4 is objected to because only that which is old is illustrated, and therefore a legend such as "Prior Art" is required. Applicants submit that this objection has been overcome by the attached replacement sheet.

Claims 1-8 are objected to for informalities regarding antecedent basis. Applicants submit that the term "the centerline" in line 8 of claim 1 finds proper antecedent basis in the term "a centerline" in line 6 of claim 1 (referring to the line numbering of claim 1 as shown in the Preliminary Amendment filed November 13, 2007). Further, Applicants submit that the remainder of this objection has been overcome by the foregoing amendments to claims 1 and 8.

Claims 2 and 4 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite regarding lack of antecedent basis for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Claim 1 has been amended to state "lower electrodes," and thus provides proper antecedent basis for claims 2 and 4. Thus, Applicants submit that this rejection has been overcome by the foregoing amendments to claim 1.

Claims 1-8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Ouchi (U.S. 7,002,284, hereinafter Ouchi' 284) in view of Terada (U.S. 5,854,427).

Independent claim 1 recites, in part, "second piezoelectric films having upper electrodes and lower electrodes formed on a main surface of at least one of the two arms so as to be apart

from each other with the center line thereof as a boundary for monitoring amplitude of the arm in a X-axis direction **when driving signals having the phases reversed from each other are supplied to the upper electrodes and hence the turning-fork performs fork-oscillation in the X-axis direction with the center line thereof as a boundary, the upper electrodes outputting monitor signals having the phases reversed from each other**."

An exemplary and non-limiting example of claim 1 is described at page 22, lines 17-20 of the application, stating, "[a]ccordingly, electric charges according to the amplitude of fork-oscillation having **opposite phase from each other and the same magnitude are generated on upper electrodes 13a, 14a.**

Further, page 24, lines 10-20 of the application states:

> In this arrangement, since the electric charges having the opposite phases from each other and the same magnitude are added with the output signals from current amplifiers 40a, 40b by adder 60 and hence cancelled, a signal on the basis of the Corioli's force can be extracted as a monitor signal generated on upper electrodes 13a, 14a according to the amplitude of the fork-oscillation in the X-axis direction. **In this arrangement, a configuration for detecting the angular speed is not necessary, and hence downsizing of the angular-speed sensor can be provided**.

Thus, the tuning-fork type transducer of clam 1 facilitates downsizing of the angular-speed sensor.

In order to establish *prima facie* obviousness under 35 U.S.C. § 103(a), all the claim limitations must be taught or suggested. Further, "rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F. 3d 977, 988 (Fed. Cir. 2006). At a minimum, the cited prior art references do not disclose (expressly or inherently) or suggest the above recited element.

The Office Action, at pages 4-6, asserts that Ouchi' 284 and Terada disclose all of the elements of claim 1, but does not explicitly address the claim 1 elements of driving signals "having **the phases reversed** from each other" and the upper electrodes outputting "**monitor signals having the phases reversed from each other**."

Terada, at column 4, lines 27-48, states merely:

> FIG. 3 shows the circuit diagram. The detection terminal 18 is connected to a reversal input terminal of a charge amplifier comprised of an amplifier 21 and a capacitor C1. An output terminal 27 of said charge amplifier is connected to a synchronous detection circuit 22, a filter 23, and ultimately to an output terminal 24. A reversal amplifier comprised of resistors R1,R2, a variable resistor Rx and an amplifier 25 is for forming the first and the second driving power sources 15,16. Numeral 26 represents an AGC amplifier for stabilizing the amplitude of tuning fork.
>
> FIG. 4 shows another example of an angular velocity sensor according to the first embodiment of the present invention; where, the polarization direction P3 of tuning fork arm 4b,5b is changed to be the same as P1. In this case, the detection electrode is unable to pick up a sum of Coriolis signal components of tuning fork arms 4a,5a and 4b,5b, which was performed in the embodiment of FIG. 2. Therefore, each of Coriolis signals generated in detection electrodes 18a and 18b is picked up individually, and then **added together after reversing** a signal component of a Coriolis signal derived from either one of the tuning fork arms, to obtain a detection signal.

Therefore, Terada adds the signals together **after reversing** a signal component, which implies that the signals generated in the Terada electrodes have the same phase (which requires the later reversal before addition). In this fashion, **Terada teaches away from claim 1.**

In contrast to Terada, the tuning-fork type transducer of claim 1 outputs **monitor signals having the phases reversed from each other.**

Thus, at a minimum, the combination of Ouchi' 284 and Terada fails to teach or suggest the forgoing element, and therefore claim 1 is allowable over the cited art.

Under Federal Circuit guidelines, a dependent claim is allowable if the independent claim upon which it depends is allowable because all the limitations of the independent claim are

contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*, 819 F.2d at 1100, 1108 (Fed. Cir. 1987).

Thus, as independent claim 1 is allowable for the reasons set forth above, it is respectfully submitted that dependent claims 2-11 are allowable for at least the same reasons.

Accordingly, it is urged that the application, as now amended, is in condition for allowance, an indication of which is respectfully solicited. If there are any outstanding issues that might be resolved by an interview or an Examiner's amendment, Examiner is requested to call Applicants' attorney at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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